Name:

at1110paper_practice_test (v1)

1. Expand the following expression into standard form.

$$(2x + 5)(4x + 3)$$

$8x^2 + 6x + 20x + 15$

$8x^2 + 26x + 15$

2. Solve the equation.

$$(5x - 9)(3x - 8) = 0$$

$x = \frac{9}{5}$ $\quad$ $x = \frac{8}{3}$

3. Expand the following expression into standard form.

$$(9x - 5)(9x + 5)$$

$81x^2 + 45x - 45x - 25$

$81x^2 - 25$

4. Expand the following expression into standard form.

$$(9x + 7)^2$$

$81x^2 + 63x + 63x + 49$

$81x^2 + 126x + 49$

5. Factor the expression.

$$x^2 - x - 20$$

$$(x+4)(x-5)$$

6. Factor the expression.

$$25x^2 - 9$$

$$(5x+3)(5x-3)$$

7. Solve the equation with factoring by grouping.

$$18x^2 - 24x - 15x + 20 \;=\; 0$$

$$(6x-5)(3x-4) = 0$$

$$x = \frac{5}{6} \qquad x = \frac{4}{3}$$

8. Solve the equation.

$$11x^2 + 61x - 41 \;=\; 4x^2 + 2x - 5$$

$$7x^2 + 59x - 36 = 0$$

$$(7x-4)(x+9) = 0$$

$$x = \frac{4}{7} \qquad x = -9$$